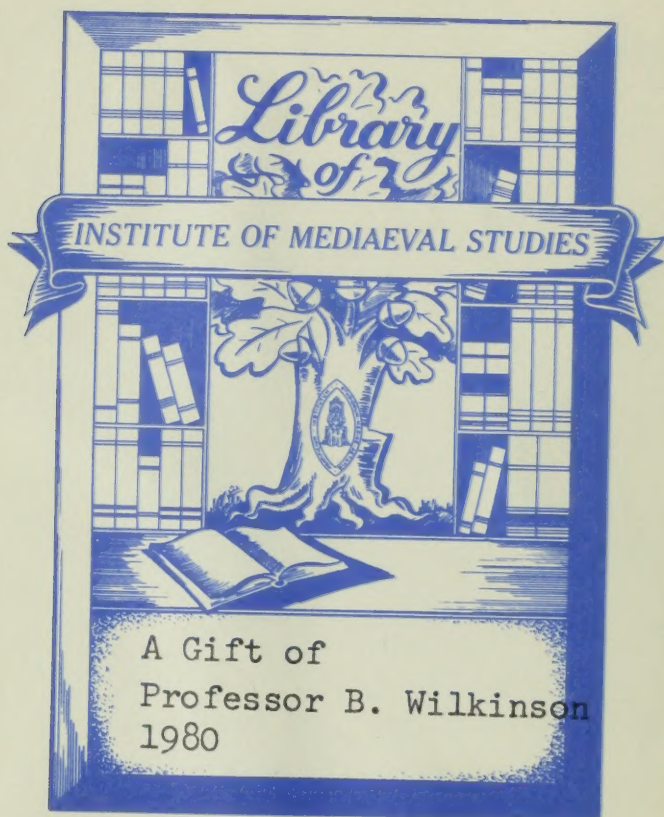


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A Gift of  
Professor B. Wilkinson  
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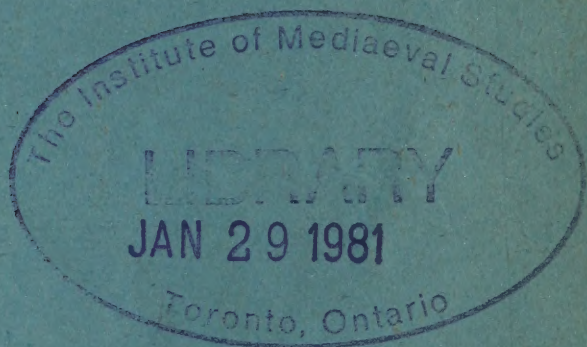


W. K. Munson

# TIME CHARTS.

BY

HELEN M. MADELEY.



THE HISTORICAL ASSOCIATION,  
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# The Historical Association.

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## TIME CHARTS.

By HELEN M. MADELEY.

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### I

#### THE VIRTUES OF THE CHART.

A very brilliant woman once told me that she hated History, because you had to keep remembering that "14th century" meant "thirteen hundred and something."

It is knotty chronological problems of this sort that prevent History becoming a popular pursuit, and that deprive so many people of the illumination and the delight that historical interests can give. The cherubs that squat above Shakespeare's tomb are pathetic and even charming to the visitor who can regard them as the Northern response to Donatello's *putti*; but that alluring train of thought is merely an annoyance if one can't be sure that Donatello came first. It is tantalising to suspect an allusion to contemporary events in the book you are reading, or the influence of the foreign immigrant in the architecture of the village you are visiting, if you can't determine without a reference to Haydn that the contemporary event or the foreign immigration did not happen a century too late.

If one is not to be continually baulked in one's historical adventuring one must be freed from such vexations; and that freedom can only be obtained if one has some knowledge of the sequence of events and a few chronological fixed points.

In dealing with this fundamental difficulty the Time Chart is our best ally. People who have seen in print that the Romans came in A.D. 43 and the Normans in 1066 can and do confuse the two conquests: but people whose time chart has placed them several feet apart are not likely to regard Norman and Roman as interchangeable terms. Most of us are visualisers and our best chance of securing our sequences and our fixed points is to get them so stated that the visual image we carry away is distinct and definite enough to do our memory work for us automatically.



Probably no amount of charting will save us entirely from the necessity of hammering in a few numerical dates if we want to make a serious study or a leisurely recreation of History. But the practice of charting will greatly reduce both the number of dates required and the amount of labour each fixture will entail.

Quite apart from its appeal to the visualiser the terseness of the chart makes it easy to learn from. Just as spacial relations and comparisons can be expressed more briefly and definitely on the map than in description, so it is possible to show on the chart, more simply and concisely than in any other way, time distance, time sequences and time parallels. Two or three entries exhibit more convincingly than several paragraphs of letterpress that Abraham was not the only man on the move round about the year 2000, or that England was not exactly a pioneer in the discoveries of the 15th century. Pages of eloquence from Mr. Wells do less to make us realise the vastness of geological time than a few words notched by his draughtsman on the accompanying time chart; charted History "begins to teach itself."

Better still, it makes the child want to teach himself. If you have known King David as a picture in a Sunday book it is quite a new experience to find him figuring on the same time-line as your own name and invites to all kinds of intellectual exploration. Shakespeare as something you learn by heart, Shakespeare as one of the important names in the last scamped paragraph on Elizabeth's reign, even Shakespeare as the subject of a brilliant lesson is less solid and less intriguing than the Shakespeare whose journey to London you enter on your chart so close to the Armada that you can't fail to notice that he got there in time to see the beacon blazing on Hampstead Heath and to hear the story of Elizabeth's speech to the troops at Tilbury.

A word or a diagram is more striking and more picturesque in the isolation of the chart than submerged in the letterpress of the text-book. The bare names of Charlemagne and Barbarossa and Tamerlane promise a thrill; though embedded in a sentence they would only be a nuisance to pronounce. A Norman castle, a bit of Assyrian sculpture, a Roman legionary, all suggest inquiry and suggest it far more invitingly than the same pictures between the covers of a book or merely pinned to the board.

While the chart is a stimulus to the pupil, to the teacher it is a safeguard. "History has suffered . . . from the confusion of educational purpose. Notions of 'thoroughness,' 'accuracy' and the like transferred from mathematics and other 'efficiency' subjects, have led to a systematic cramming of the few facts of a few portions of History, while hardly any attempt at bird's-eye views and large panoramas has been made. . . ."\* Lovers of

\* F. H. Hayward and A. Freeman. "The Spiritual Foundations of Reconstruction," p. 35.



History who are immersed in the work of teaching are probably as keenly aware of this particular water-hole as the outside critic. But it is a real danger ; for our very virtues as students of History, our desire to relate cause and effect, our aversion to a generalisation which is not based on concrete fact, our hatred of work that is fluffy and superficial, tend to make us, as teachers, too insistent on detailed accuracy, too much the slave of the link lesson, too prone to cram our pupils with de-vitalised information. The chart compels selection, and makes it possible. We are no longer afraid to create vivid patches of knowledge unrelated to anything else, for the time-line itself relates them ; and we cannot avoid discriminating the significant from the insignificant, for it is a physical impossibility to get anything but the really important events on to the chart. Yet at the same time the chart is a bulwark against vague picturesqueness and unsubstantiated generalisations by the very precision and definiteness of the statements it does make. The chart can't be carried away by its own rhetoric ; there isn't room. To the young chart-maker the chart is often an incentive to the most detailed accuracy. Girls who have been bitten by the chart-making craze will spend hours discovering in which year the victory of Lepanto justifies them in swelling the line which indicates the development of the Hapsburg power or at what stage the indigo band which represents Sweden should be watered to pallor in recognition of the death of Charles XII. The chart makes a stimulating objective as well as a stimulating base.

In his recent book, Professor Graham Wallas observes that the strain of school is due to the fact that teaching and learning are intermittent instincts and that no one wants to be perpetually doing either the one or the other. " Teaching and learning are necessary for the continuance of human existence ; but because a certain quantity of teaching and learning are delightful to most human beings and because a much larger quantity leads to the teacher becoming bored and the scholar being ' fed-up,' we must be always on the look out to diminish the amount of teaching which is required for a given amount of education."\* The time chart is the soundest device for reducing " our present burden of daily teaching and daily learning " where the study of History is concerned. Like the atlas it stimulates and clarifies and fixes, and so reduces the burden both of teacher and of taught. Without it the teacher has had to provide all the stimulus and most of the explanation, and the text-book has been mainly something you had to get up. But with the chart to waken curiosity and suggest questions, to connect and to fix, the text-book has a chance to become literature and the teacher should be free to guide only when urged and to prophesy only when inspired.

\* Graham Wallas. " Our Social Heritage," pp. 148-9.



For the function of the History teacher is changing. Class work can never disappear; in this subject, more than in any other, personal guidance and personal inspiration are needed. But much of the ground that has in the past been covered by the class teacher will in the future be left to the private and independent study of the pupil. If this independent work is to be efficient, it must have its appropriate implements; and the implements of the History student are the Chart and the Library.

## II

### TYPES OF CHART.

Charts can be classified conveniently according to their method of representing time. They are of three types:

- (1) Rectangular or Chess-board charts.
- (2) Circular or View-point charts.
- (3) Longitudinal or Time-line charts.

(1) In the *Rectangular Chart* the century is represented as a square block, each year usually as a single chequer. In these "chess-board" charts the top row of chequers usually stands for the first ten years of the century, so that the end square on the right-hand side always represents a date ending in 9; and the end square on the left-hand side a date ending in 0. Events which are tactful enough to fall into these squares are very easily memorised; it is events which fall into the middle years of the decade that give some trouble and are apt to get a trifle confused.

The popularity of this type of chart is probably due to its use by Miss Beale of Cheltenham. It made a great advance on previous methods of teaching History. It gave the pupil an active share in the lesson; it set the child hunting on her own account for events to fill into its chequers; it exercised her ingenuity to find symbols, and unlike most charts it was extremely manageable in size and shape. It was useful, too, in memorising detailed dates, especially as it was customary to paint the different periods, *e.g.*, the reigns, in different colours. But though it showed duration over short periods, *i.e.* over anything which could be packed into a century, it was not very much use for large scale chronological work. It did not show sequences very clearly, except over quite short tracts of time; it was very good for showing the development of Henry VIII's ecclesiastical policy, but not at all good for exhibiting the development of mediæval armour or Gothic architecture. It did not usually show synchronisms at all. Partly for this reason and partly because it could not show



or even suggest long vistas of years, it did very little to stimulate imagination ; and this was probably its chief defect.

An attempt has recently been made to remedy this drawback by placing side by side rectangles representing periods of different duration, and shading in the longer the space that would be occupied by the shorter if drawn to scale. But the result is confusing and not very impressive and tends to confirm one's opinion that the chess-board chart is best suited to detailed work.

(2) In the *Circular Chart* periods are represented by concentric circles or segments of circles. The student is supposed to regard himself as standing at the centre, generally at the date of some epoch-making event, on which the history of the previous years converges: *e.g.*, the century succeeding Waterloo is treated in this way, the history of the various countries of Europe converging to produce the outbreak of war in 1914.

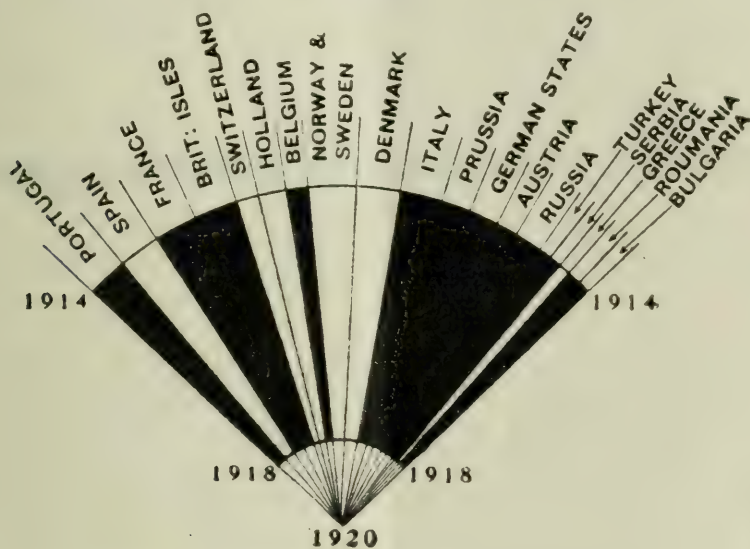


FIG. I. CIRCULAR OR VIEW-POINT CHART.

(This diagram is reproduced from "Since Waterloo" by Dr. Robert Jones, by permission of Messrs. Constable and Company, Limited.)

Such charts have the advantage of focussing attention on one event, but for that very reason they tend to force other events into an artificial relation and to narrow their meaning. They fail to find room for more than a few interests and as they are not usually very clear, and as the formula is only applicable to a few periods, they are not helpful as memorisers.

(3) The *Longitudinal* or *Time-line Chart* has very generally superseded the chess-board chart and it shows no sign of being ousted by the circular chart. It is probably the chart of the future. Its simplicity is one of its virtues ; all that is needed is a line on which



periods—centuries or years—can be marked off and on which events can be recorded. This formula has great elasticity; it can be used for all periods and all kinds of developments; it can be confined to one country or adapted to include the whole world; and it is just as suitable for black board or note-book work when there is no time for drawing chequers or concentric circles as for the wall chart which is to be a permanent decoration to the class room.

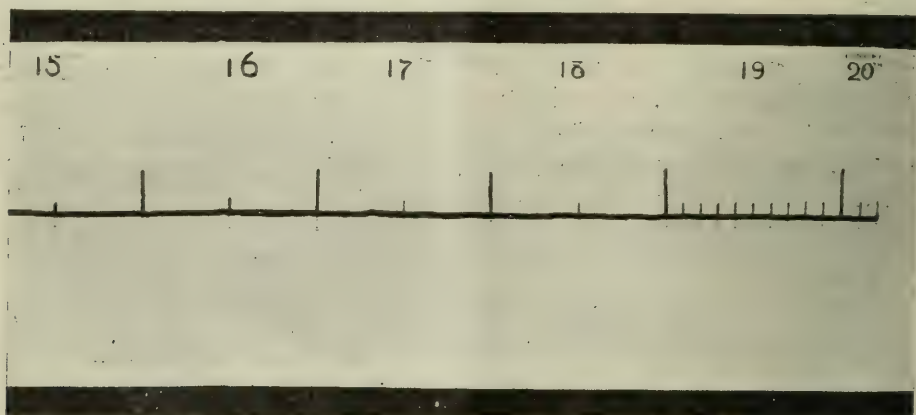


FIG II. SECTION OF TIME-LINE CHART READY FOR USE.

(Reproduced from "*History as a School of Citizenship*," by permission of the Clarendon Press.)

The Time-line Chart is equally good for showing the synchronisms of events, their sequences, and their comparative duration. The beautifully clear parallel charts introduced into the "*History of Everyday Things*"\* prove its appropriateness for synchronising illustrations, while its extraordinary effectiveness in the earlier chapters of Mr. Wells's "*Outline of History*" shows its special fitness for long-range work.

From the teacher's standpoint, too, it has many advantages. The wall chart made on the time-line principle is an admirable exhibition ground for pictures of all sorts, and, consequently, a great incentive to the making and collecting of them; and as it is specially adapted to indicate or imply great vistas of time, it is a very valuable stimulus to imagination.

It has, in fact, only one defect, and that is the extreme inconvenience of the length to which it is apt to run.

\* \* \* \* \*

There are many varieties of the Longitudinal Chart, most of them distinctly attractive.

\* M. and C. H. B. Quennell.



(i) *River Charts.*

The "Stream of Time" which Miss Edgeworth provided for Frank was a glorified time-line chart. "This stream seemed to issue from clouds divided into numerous streamlets of different breadths and various colours: only one of these, of a uniform colour, flowed straight in an uninterrupted course. All the others . . . were more or less broken in their progress, sometimes running thin till they came to nothing, or were swallowed up in neighbouring streaks, or sometimes several joining together and after a little space separating in straggling figures. Across the coloured streaks were printed numerous names, which were the names of the different nations and empires of the world . . . Chinese, Jews, Egyptians, Phœnicians, Assyrians, Persians, Macedonians, Grecians, Romans, . . ."\* No wonder Frank exclaimed when he first saw it, "I should like to visit it every day."

(ii) *Pedigree Charts.*

These are perhaps the most delectable of all the time-line variants.

One period, or development, is represented as descending, as if part of a genealogy, from another, the time-line itself sometimes being placed at the side, and sometimes being left to the imagination. There is a very elaborate chart of this description showing the growth of British parties in Dr. Robert Jones's "Since Waterloo." Such charts are particularly valuable in recording developments which involve gradual differentiation, such as the growth of institutions. It is not always easy, however, to adhere to the proportional treatment of time, and consequently pedigrees are most useful when sequence, and not comparative duration, is the aspect that needs emphasising.

The Pedigree Chart can be made very charming if treated pictorially, and can then be applied to a much greater variety of subjects. The Regional Association used to possess a delightful chart exhibiting in pictures the successive stages in the development of Edinburgh, and another chart, treated like an old-fashioned genealogy, showing the development of Aberystwith from the pre-historic village on Pen Dinas, through the generations of fishing village and Edwardian borough, till it ended in picture post cards of the University buildings and the modern watering-place.

The idea might well be applied to a good many kinds of social developments, and an intelligent boy or girl, with a copy of Quennell's "History of Everyday Things," might work out pedigrees of the dwelling house, or the ship, or, indeed, of almost any one of the

\* "Frank—a continuation of Frank in Early Lessons" (Maria Edgeworth).

everyday instruments of living, while even adults have been known to occupy themselves for days in making out, in pedigree form, the industrial development of their own town or country-side.

(iii) *Trees.*

These usually abandon the attempt to express comparative time-distance, and confine themselves to showing sequence, but they generally, though not invariably, use the time-line idea. The mediæval "Tree of Jesse" was a glorified and specially impressive specimen of the Tree Chart. Its latest descendant is to be found in the Tree of Tongues which Mr. Wells includes in his History, and its loveliest offspring in the Cistercian Tree which Fra Angelico painted under his great Crucifixion.

When it is sequence and growth that needs expression, the time-tree might be very much more widely used. But it is not well adapted to express duration, and any attempt to show, *e.g.*, that the British Parliament had its roots in the Witan, with reference to a properly measured time-line, would result in such an abnormally long trunk and such embarrassingly luxuriant foliage, that very little resemblance to a tree would survive.

(iv) *Corridor Charts.*

One recent series of History textbooks uses a Corridor Chart, in which time is represented as a receding passage, the events being inscribed on the transverse boards which form the floor. This is not a very helpful adaptation, for it tends to leave the impression that the more distant event is smaller and less important, and a chart of this type is consequently apt to defeat its own object.

(v) *Composite Charts.*

Some modern charts adopt the convention of the time-line, but combine the expression of the event's position in time with an attempt also to express its direction. Mr. Wells, in his War Charts, adds to the chronological charting of events a line which wavers to and fro with the wavering success of the fighting; in his charts of the wanderings of the peoples he adds to the chronological statement arrows which indicate the direction of the migrations. Dr. Robert Jones charts the history of the Labour movement on a time-line, adding a duplicated line which indicates that movement's dwindling and swelling success (*cf.* p. 9). The Pendulum Chart is a specialised and elaborate variety of the Composite Chart. It generally uses the time-line as a framework on which to hang the chronology of events, but combines with it a pendulum swinging to and fro to indicate the direction of the reactions in the Wars of the Roses, or the Party Quarrels of the nineteenth century, or whatever happens to be the conflict under discussion (*cf.* p. 19).



## ENGLAND SINCE 1815

*The Combination Acts 1799 & 1800 forbade under heavy penalties the formation of T. Unions*

## Growth of Trade Unions

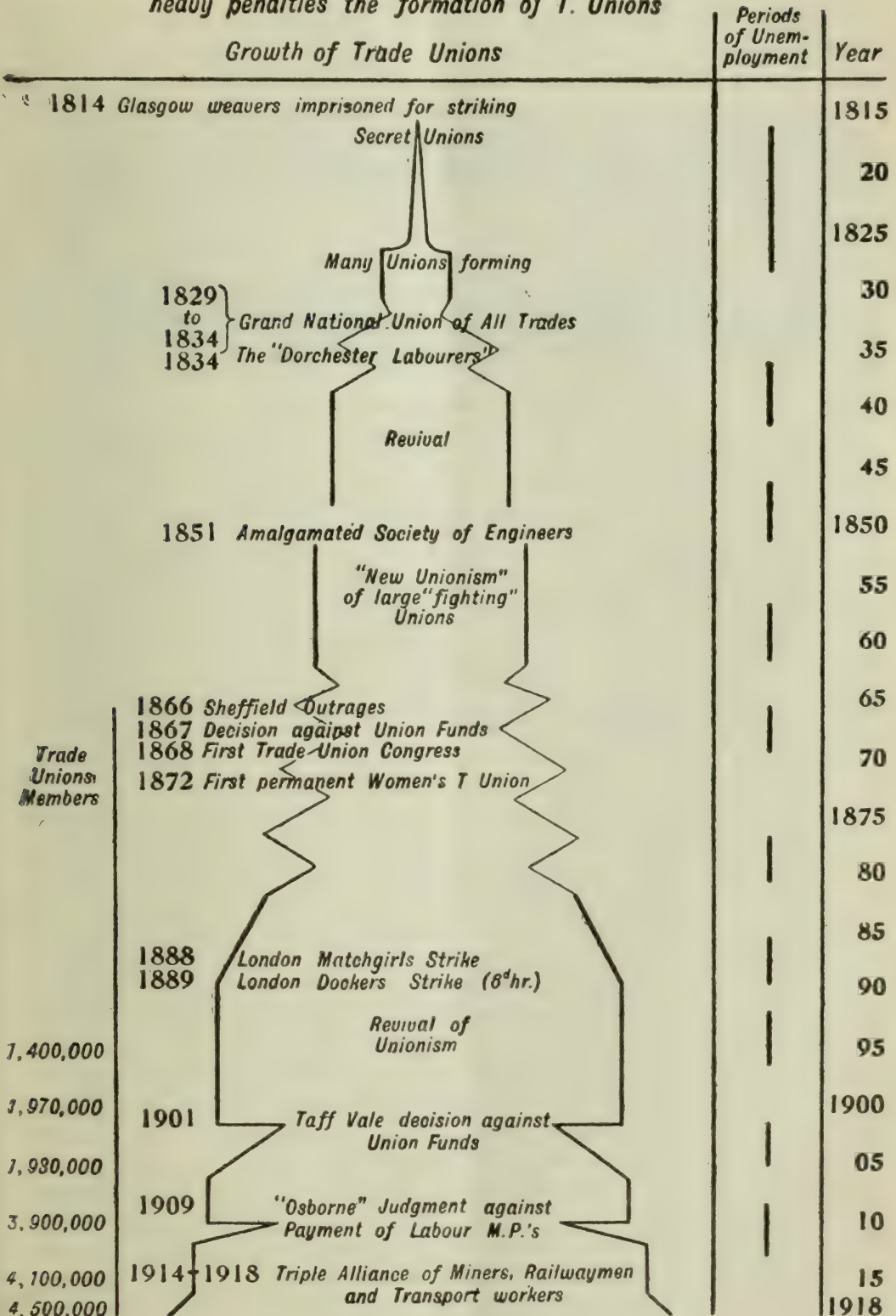


FIG III. COMPOSITE CHART SHOWING DEVELOPMENT OF THE LABOUR PARTY

From Dr. Robert Jones's "Since Waterloo," by permission of Messrs. Constable and Company, Limited.)

Charts of this description are enthralling if one works them out for oneself. They are an interesting way of summarising a lesson or a course of reading, and are therefore useful for notebook work, or for blackboard work in which the class co-operates. But as permanent records they miss their destiny. They are too complex for automatic memorising, and by trying to express the quality of events as well as their chronology, they run the risk of a too arid and desiccating definition.

In the temporary blackboard chart which recapitulates a lesson, variety is an advantage, for it prevents mechanical work, and complexity is no drawback, for no amount of complexity in a chart will confuse the class which has helped to make it. For class work, therefore, composite charts are useful. But for the permanent wall chart they are generally too elaborate.

The *first* essential for the permanent chart is that it must not confuse the eye. If it is to stimulate interest and imagination it must be striking and simple. It must neither try to express too many facts, nor too much about them. The *second* essential is that it must not confuse the mind. If it is to fix facts it must state them so briefly and so directly that there is no difficulty in interpreting the statement, or in re-interpreting its memory image. Permanent charts used for memorising should, therefore, be made in a uniform convention. We must adopt either the Chess-board, the Time-line, or the Circular variety, and since the Time-line Chart is most universally adaptable, we shall be well advised to adopt this.

### III

#### PRACTICAL DIFFICULTIES.

The only disadvantage of the Time-line Chart is that it is often inconveniently long. In the notebook this is not a serious drawback, as a strip of paper can easily be pasted inside the cover and folded into the book when not in use. But the most valuable charts are public property, and on the walls of some class-rooms the length of the Time-line Chart presents a genuine difficulty.

Occasionally this can be overcome by hanging the chart perpendicularly: but even then, as soon as it is more than a couple of yards long, it is neither easy to get at nor easy to see. A more serviceable expedient is the rolled chart devised by Miss Mabel Barker (Fig. iv, p. II). This is made on the same principle as a Roman book, and though for transport purposes it can be carried as one roll, it more often lives in two, with the part actually in use displayed between them. It is invaluable for charting general history, as it can be extended almost without limit: it can be



unrolled and spread out in the class-room, or carried out of doors for field work : and though it cannot well be used for pictures, it will take any number of inscriptions.

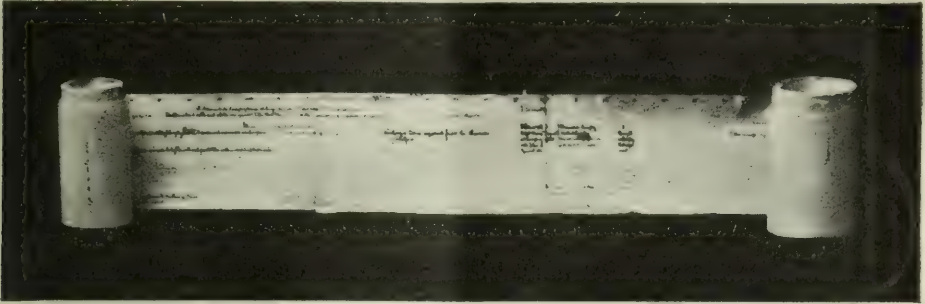


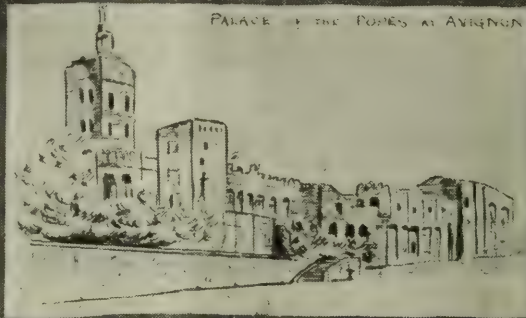
FIG. IV. ROLLED CHART USED FOR FIELD WORK BY MISS MABEL BARKER.  
(Reproduced from "*History as a School of Citizenship*," by permission of the Clarendon Press.)

Another expedient for getting over the time-line difficulty is to make your chart on the principle of the nursery "panorama," or of the folding screen. For boys and girls of ten years and upwards panorama charts may be made of stout paper, and can be used for all kinds of entries, pictorial or verbal. For younger children the panorama should be made of cardboard cut in oblongs, twelve inches by ten inches, and fastened together at the ends with strips of gummed linen ribbon (Fig. vii, p. 17). Ten pieces of cardboard make a practicable panorama which can be spread out on the floor or table, or folded up and handled like a book. It is convenient to treat each oblong of cardboard as representing one century ; for little children only one picture should generally be shown for each century, so that it is important to select an event which is both typical and picturesque ; but for children of nine or more each century may safely be illustrated by a picture gallery as varied as the page of an old-fashioned scrap-book.

Rolled or folded charts are, however, mainly for reference : as the chief purpose of the chart is to give a bird's-eye view of a tract of time, and to fix its main features in memory, the really important charts are those that can be kept on the walls, and no devices of folding or rolling adequately solve the problem. The only real solution is to recognise the fact that the time chart is the necessary apparatus of the History lesson, and that space must be found in the class room for it. We do not hear of schools where room cannot be found for maps or blackboards. As a matter of fact there are few class rooms which cannot provide several yards of unbroken wall ; and the obstacles to using those yards for the display of a History chart will disappear very rapidly as soon as the History chart becomes an attractive and decorative object.

14<sup>TH</sup>

BABYLONISH CAPTIVITY OF THE POPE



DEATH

BANNOCKBURN

CRECY

BLACK

POITIERS

PEASANTS  
REVOLT

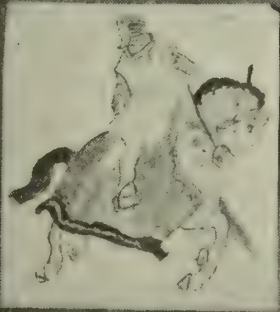


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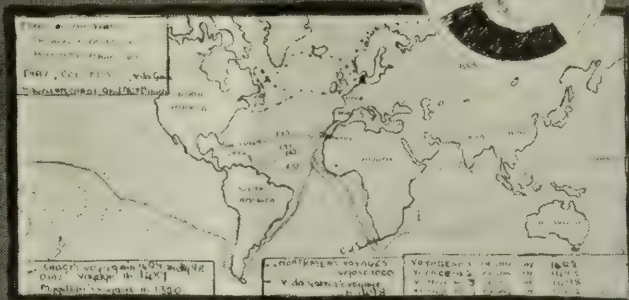




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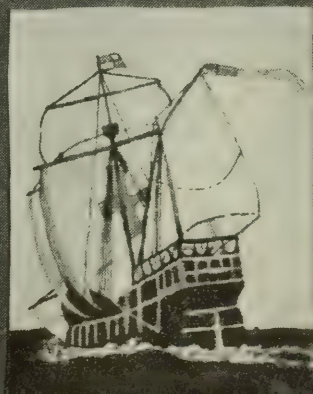


TURKS TAKE  
CONSTANTINOPLE

WARS OF THE ROSES



Watermark - The King's Arms



In the case of those class-rooms where there really is no adequate stretch of wall, use can often be made of the beading of the dado. A strip of paper marked off into centuries can be pinned to this and pictures fastened at the appropriate chronological points under it. Such a makeshift has one advantage over the orthodox chart: its entries are necessarily few, and all pictorial.

But the normal class-room chart is a wall chart twenty-four or thirty inches wide, and some yards long. It can be made very cheaply of sheets of lining paper pasted together. Lining paper forms an excellent background for Indian ink; it has also the advantage of being very light, and can be fixed to the wall so easily with drawing pins that the wall remains almost unscarred. It is not, however, very durable, it will not stand much cleaning, and it is hardly stout enough to carry the picture post-card. So that for a long-service chart it is often worth while to use cartridge paper. This is strong enough to carry anything you like to gum to it, and to outlast any class and almost any teacher. It is, however, rather heavy, and though drawing pins can be made to carry it they need to be driven into the wall too far to be at all healthy for plaster. One method of meeting this difficulty is to have a long wooden frame made to fit the wall space available: this can be slung from the picture rail, and to it the paper chart can be pinned. But the ideal solution is to have slats fixed to the wall, and in the happy future when the History chart has come into its own as an essential factor in the curriculum, such slats will be a normal feature in every well-equipped class-room.

A very attractive chart can be made of brown paper or of tinted pastel paper, with entries either in Indian ink or in Chinese white (*cf.* Fig. v.). When illustrative cuttings, picture post-cards and children's drawings are fastened to this it becomes so decorative that the teacher who wishes to introduce it into a colleague's classroom is received with enthusiasm instead of with contumely.

Reference to the time-line should be easy: it is well, therefore, to have the line with the centuries indicated on it down the middle of the chart. Time-line, century divisions and numbers should be boldly marked, and for this purpose a twopenny paint brush is much more serviceable than a pen.

In charts dealing mainly with English History it is a good plan to keep one side of the time-line for English, and the other for foreign, events. The entries of events should be few and very distinct; but it is quite safe to encourage one's pupils to collect and make pictures of contemporary characters, costumes or social life to be added to the chart, provided the time-line itself and the events



entered on it are not invaded and so confused. Illustrations of a social type often make a pleasant frieze : a procession of Canterbury pilgrims greatly enlivens the fourteenth century, or a troop of Norman knights the eleventh. Symbols, such as crossed swords for battles, or clasped hands for treaties, should be used as much as possible, and colour is always a help.

When dealing with the history of various countries the chart can be divided into horizontal bands, e.g., an Ancient History chart needs separate bands for Greek, Roman, Egyptian, Mesopotamian, Jewish and Persian history : teachers with enough skill to include the Far East would naturally add India and China. Some teachers divide the chart into separate bands for different classes of events, e.g., one for the Church, another for military affairs, and others for legislation and social movements ; other teachers make the entries for different classes of events in different coloured inks. Neither system is very successful. The classification is necessarily a little arbitrary, and usually seems quite meaningless to boys and girls under sixteen : and after sixteen they are ready for a different type of chart.

The chief obstacle to the making of charts is the amount of time consumed by the measuring out and marking of the time-line. In the case of wall charts this is a cumbrous business, as the size of the paper necessitates the use of a large table, and as ink and gum applied on a large scale take some time to dry. Small charts for individual use are also tiresome to construct : they absorb a good deal of time if left to the pupil's own manufacture, and children under twelve so frequently go wrong over the measuring and numbering that a good deal of the teacher's time is apt to be occupied in correcting them. They can be made on a hektograph jelly, but lines in hektograph ink are so apt to smear that this is not a very satisfactory solution. A great saving of time is effected if squared science paper can be used for individual charts, and this forms the most convenient material at present available for rolled charts or for panorama charts for pupils of twelve or more. The paper is very strong, and will stand a great deal of wear and tear, and it takes very little time to darken and number the divisions of centuries and decades. Imperial sheets of millimetre paper form a serviceable basis for detailed individual charts dealing with special periods or special developments, or for temporary wall charts. But when a wall chart is to be in use for the whole year or longer, it is worth while, if possible, to procure a more decorative background.

## WHEN AND WHERE TO USE CHARTS.

The most important chart is the wall chart used between ten and fourteen years of age. Most teachers are trying during these years to give their pupils some bridgeheads in General History and some sort of outline knowledge of the history of their own country : and the charts used should aim first at giving as large a bird's-eye view as possible ; e.g., English History should be treated in connection with a chart which runs forward to the present day and backward at least far enough to indicate that there was a period before Cæsar's invasion. Such a chart will fix a good many facts merely by hanging in the class-room, if its entries and pictures are striking and distinct ; but it should also be constantly referred to in all class work, and children should be encouraged to use it as a kind of chronological atlas in connection with individual historical reading. If it is made an exhibition ground for a collection of pictures and drawings it becomes, in addition, a valuable stimulus, especially if it can be arranged that the class carry their chart with them up the school.

The best preparation for this systematic charting is the making of short-range charts of the children's own lives, entering such facts as their first coming to school, their measles, the arrival of the last baby, and, of course, any striking public event they are likely to remember. From this little chart it is easy to pass to a chart of the events their parents and grandparents can remember, and this carries one safely into long-range charting. Queen Victoria, while she remained a nursery memory, was a most valuable aid to the construction of introductory charts, the " things she could remember " stretching so far into the past : nowadays a grandfather's or grandmother's memory is usually the best peg available.

Children are ready for this introductory charting between nine and ten : if it can be correlated with work on the metric system they will enjoy measuring out the chart for themselves ; otherwise it is not worth while to let them attempt the making of the skeleton chart ; they get into so many difficulties that it saves the teacher's time in the long run to provide the skeleton ready made.

Children do not want memorising charts till they are about ten years old : but charts that aim at stimulating interest might well be used long before that age. An early appreciation of History can sometimes be traced to the pictures of the Armada, or Wat Tyler, or Joan of Arc, scattered among the kittens and flowers and Christmas cards in a child's scrap-book, and this possibility might well be exploited more systematically. A panorama chart with pictures of the landing of Julius Cæsar, and the preaching of St. Augustine, and Alfred and the Danes, and other stories of this






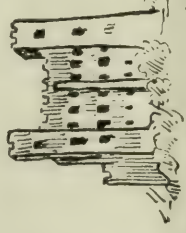
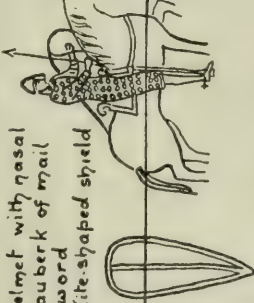

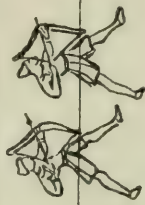

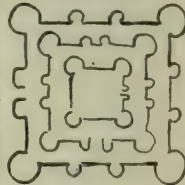
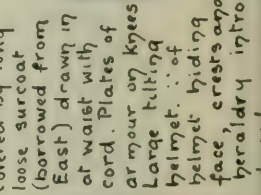


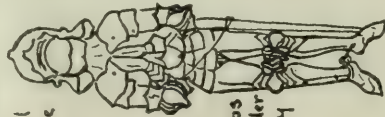
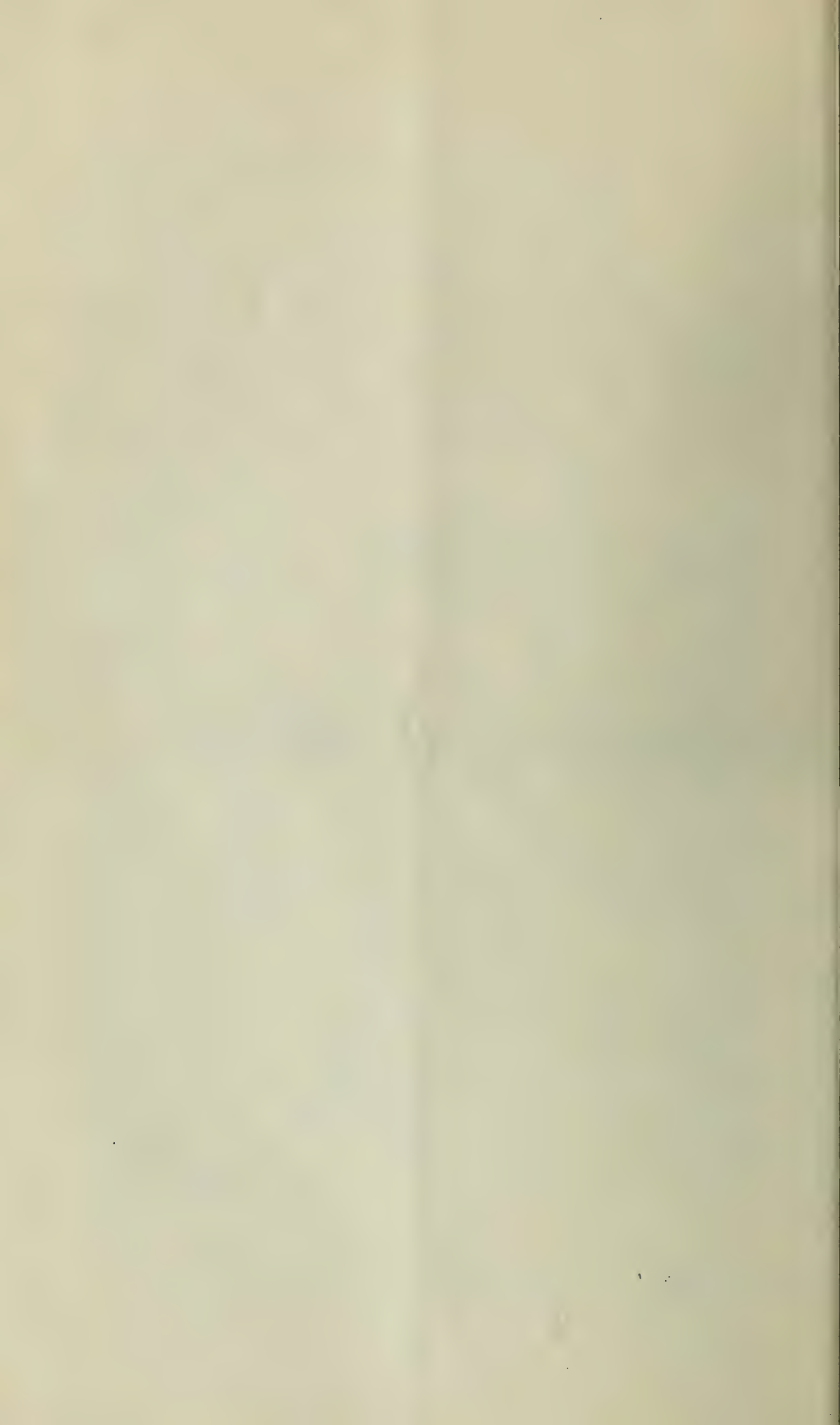
DEVELOPMENT OF CASTLES	THE KNIGHT AND HIS EQUIPMENT.	THE FOOT-SOLDIER AND HIS EQUIPMENT.	MILITARY TACTICS
<p>1100</p> <p>Motte and Bailey Woody tower on motte.</p> <p>Stone replacing palisading</p>  <p>Square Norman Keep usual by 1125. 4 Rochester - Cylindrical keeps because more difficult to mine Roofs vaulted. Brattices made - increase in solidarity - Sometimes supported by large buttresses e.g. Conisbora This usual till 1250.</p> 	<p>1 Helmet with nasal 2 Hauberk of mail 3 Sword 4 Kite-shaped shield</p>  <p>Little change except in fashion of helmet</p> <p>Slight alterations 1 Lengthening of mail sleeves 2 Covering feet and legs with mail 3 Triangular shield hung round neck or held by left arm 4 Wearing of leathern coat under mail (idea borrowed from Saracens)</p> 	<p>Ordinary dress and any weapon he could get hold of Short-bow used</p>  <p>Assize of Arms, 1181 Freeman who had 10 marks to wear quilted leathern coat and wrist cap and carry lance. Poorer freemen to have swords knives and any sort of smaller arm</p> <p>Richard and John have cross bow men.</p> 	<p>Hastings - Shock tactics - Successful combination of archers and cavalry.</p> <p>Infantry little used</p> <p>No advance in tactics, though knights saw combination of infantry and cavalry in Crusades</p> <p>Age of Sieges. Methods: - (1) Moat bridged with ladders. Defenders used (2) Engines of war used Defenders also used (3) Ram used if castle not very strong. (4) Mines made to cause walls to sink. Defenders mine (5) Movable towers made to overlook castle. Defenders Greek fire and sorties</p>
<p>1200</p> <p>Concentric Castles</p> <p>Ideal plan modified according to ground</p>  <p>This idea copied from Constantinople.</p> <p>Example of modification.</p>	<p>Mail still worn but covered by long loose surcoat (borrowed from East) drawn in at waist with cord. Plates of armour on knees Large tilting helmet... of helmet hiding face, crests and heraldry intro.</p> 		

FIG. VI. CHART CONSTRUCTED BY A STUDENT IN AN ELEMENTARY



<p>and during the next two centuries very few castles built owing to</p> <ol style="list-style-type: none"> <li>1. Decline of Feudalism</li> <li>2. Increase of Luxury</li> </ol> <p>Many castles enlarged at expense of efficiency e.g. Warwick and Kenilworth</p> <p>Fortified Manor Houses also built e.g. Haddon Hall = hall between two court yards</p>	 <p>N.B. 1. Plating extended to forearms and legs, also breastplate under surcoat. 2. Surcoat long at back, short at front. 3. Jupon over mail. 4. Ruffled hauberk shirt under mail.</p> <p>Amount of mail gradually increasing till whole figure covered with plates except for camail.</p>	<p>Long bow most important weapon</p> 	<p>English tactics all through Scotch and French Wars mainly —</p> <ol style="list-style-type: none"> <li>(1) Disable and throw into confusion enemy's cavalry by use of archers.</li> <li>(2) Charge with our cavalry e.g. Poitiers</li> </ol> <p>Defence by foot and archers Attack by archers and cavalry</p>
<p>Castles more and more like manor houses — beautiful tracery, tapestry and heraldic ornaments e.g. Wingfield Hall and 2 court yards</p>	 <p>Later even camail discarded in place of plate No surcoat worn.</p> <p>Later still knee-caps, elbows and shoulder joints extravagantly defended</p>		





sort, selected partly for their dramatic qualities and partly for the bridgeheads they offer for future historical work, would make a delightful plaything for any kindergarten and a useful base for story-telling; and it would probably leave the children with the sequence of a good many events securely fixed.

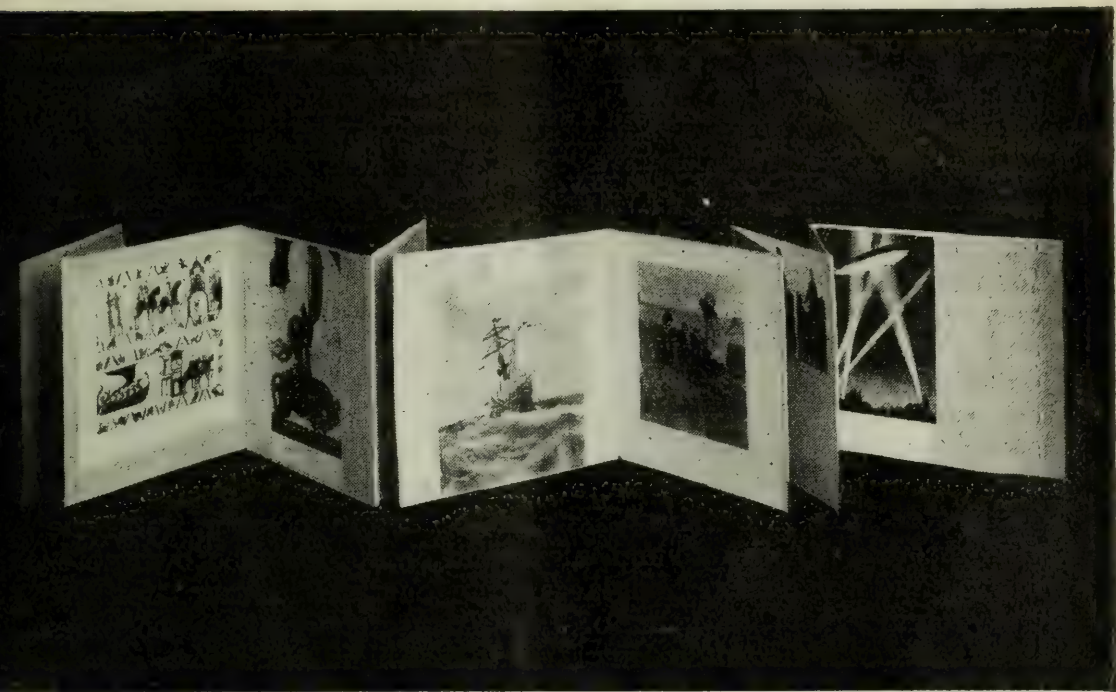


FIG. VII. PANORAMA CHART FOR YOUNG CHILDREN.

Stimulus charts of a more advanced type would be very useful for older pupils if one could induce publishers to make them. They should be constructed on the panorama principle, not too large to go, when folded, into the desk or bookshelf. If they represented important battles by crossed swords, epoch-making accessions by minute crowns, great dynastic marriages by lovers' knots, and left the pupil to fill in the appropriate names, they would provide plenty of topics for individual reading: and they might carry in addition the names or portraits of some of the great characters of history—Dante, Peter the Great, Galileo: and here and there drawings—Cavaliers and Puritans, typical soldiers of the different battles, epoch-making inventions. Boys and girls need some guidance for their independent reading, and a chart of this sort with symbols waiting to be identified and labelled, pictures needing explanation, and gaps asking to be filled, would furnish many of them with just the amount of suggestion and help they like.

Class-room charts diminish in value for people over fourteen: but, with a little encouragement, these will make charts for themselves.

Charting at this age is mainly useful because of the incentive it offers to individual reading. The Chess-board Chart led to endless textbook hunting, as there were always a good many people who could not be happy till they had an entry or drawing for every chequer. Better still is the chart that demands selection and analysis rather than mere accumulation. A good subject may be found in the history of some particular aspect of life—the development of some art or industry, the growth of communications, the rise of the Navy—its evolution traced, the notes on its various stages condensed on a chronological framework and illustrated with drawings and diagrams (*cf.* Chart showing the development of Military Science, Fig. vi). Or political developments may be analysed and graphed as in Dr. Robert Jones's Chart reproduced on p. 9, or in Mrs. Fraser Davies's Chart (Fig. viii). The information for the latter was collected from the textbook on which the class was working, and recorded partly in the form of historical maps, and partly as chronological charts attached to them: each power dealt with was represented on the chart by a horizontal band corresponding in colour with its territory on the map, and expanding as its territory extended, and each band was bordered by a black line which projected for a victory and receded for a reverse. The facts were worked out by class and teacher in co-operation, the girls recording them on small maps and charts for their own notebooks, and the teacher on large scale charts and maps for the class-room wall. The value of an elaborate chart of this sort lies in the making. It is too intricate to be stimulating to a person meeting it for the first time in its completed form, and too detailed to be of much use as a memoriser; but the working out of such a chart is an excellent incentive to careful and accurate reading: and when such charting is used as an objective and not as a base its reactions on methods of teaching and study are very valuable.

When the habit of serious reading has once been formed the chief advantage of chart making is that it compels selection. As one teacher of University students remarks: "Charts are as useful for them as for younger folks. . . . They are inclined to let their minds be overburdened by masses of detail, and they fail to see the wood for the trees; the chart helps them to realise what is really important." This is specially true when they try to apply some formula more elaborate and therefore more thought-compelling than the mere time-line record of chronological sequence. The effort to express the development of Parliament in pedigree form, or to record the Danish Invasions or the ministries of Queen Victoria on a Pendulum Chart is bracing for people whose case-books and notebooks are over-full: and the analysis and selection involved in such charting is even more valuable when applied to the intricacies of recent history.





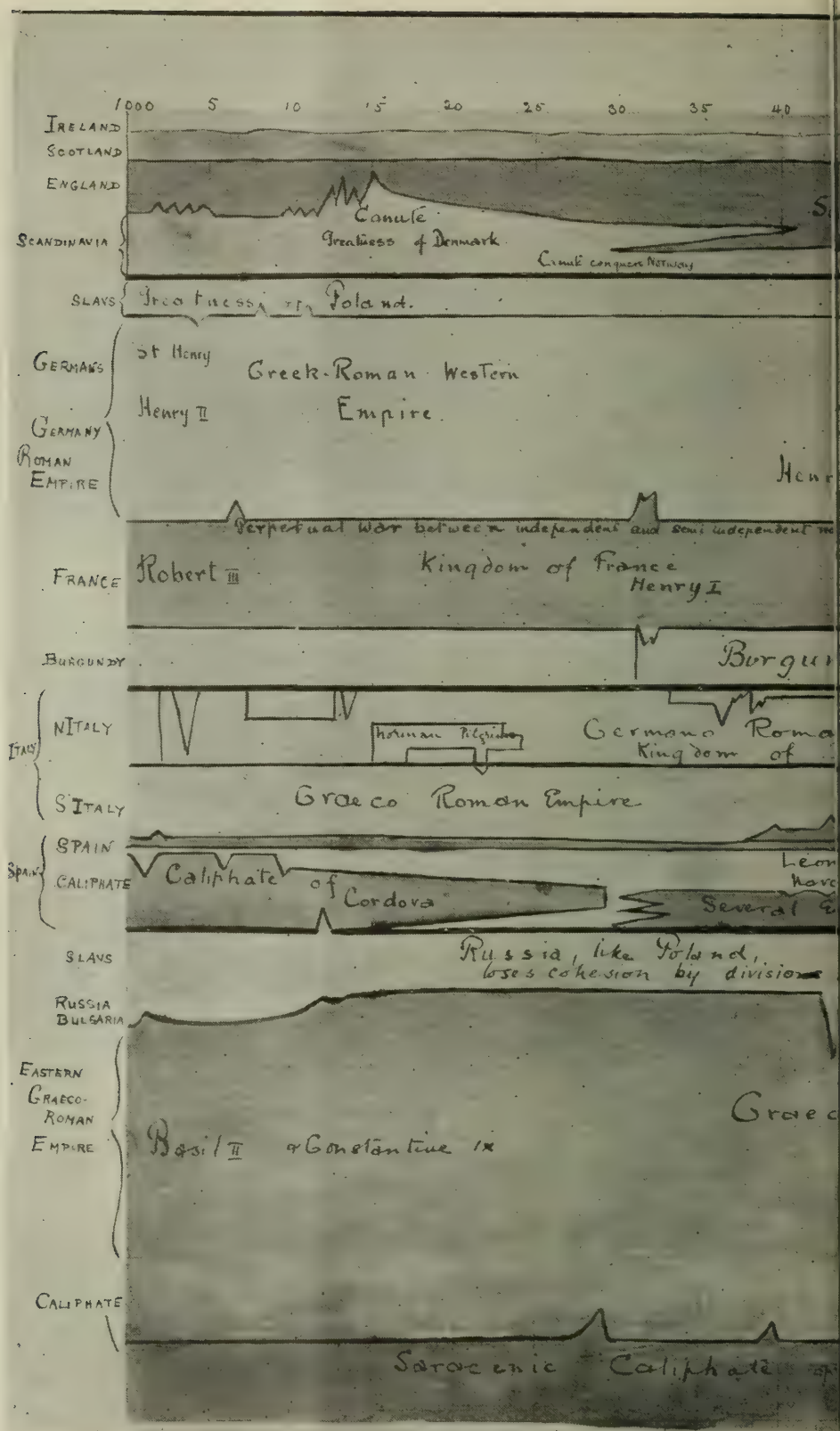
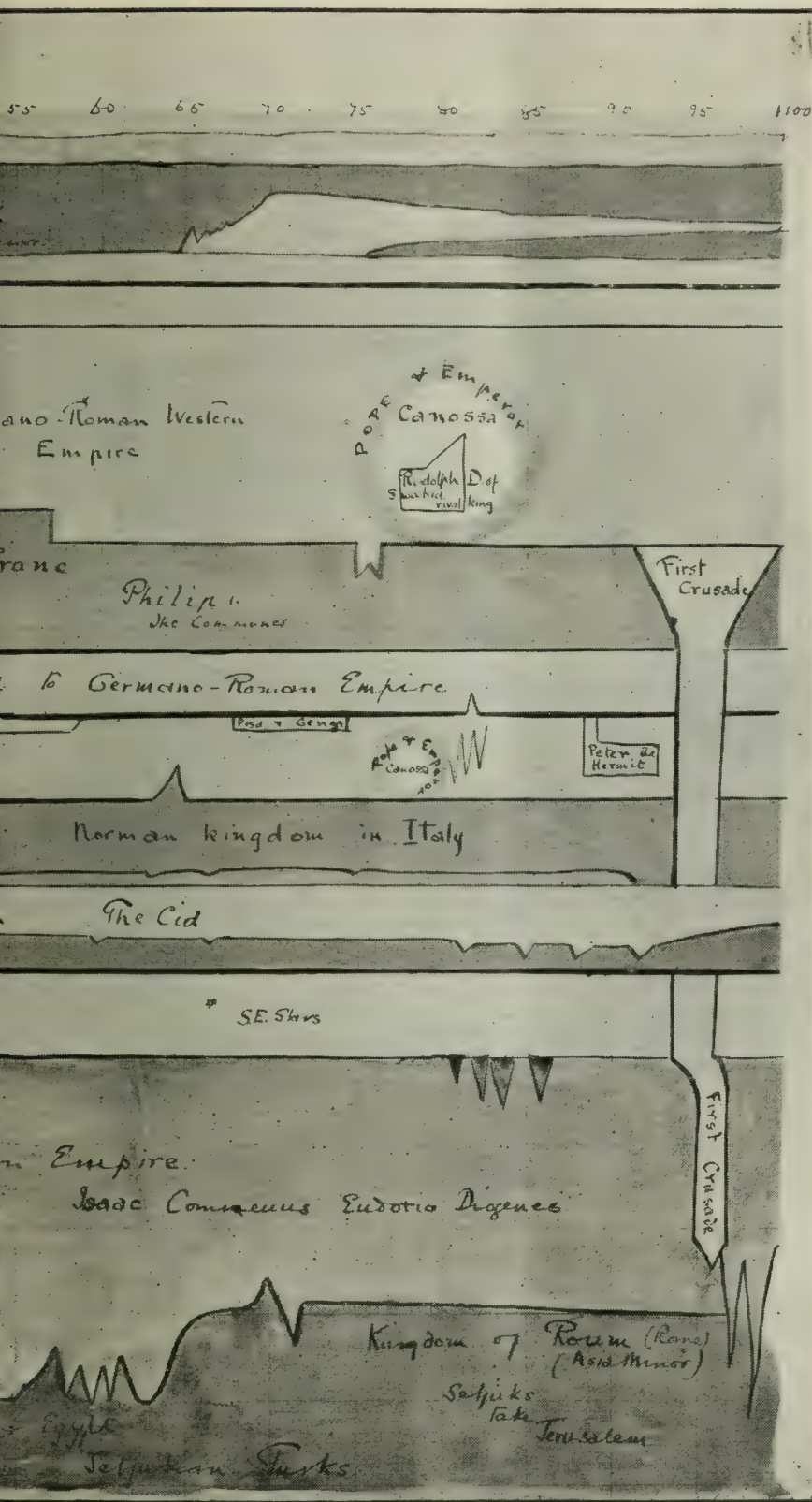


FIG. VIII. COMPOSITE CHART WORKED OUT BY TEACHER AND CLASS

(Lent by M)





RISE THE EUROPEAN HISTORY OF THE ELEVENTH CENTURY.

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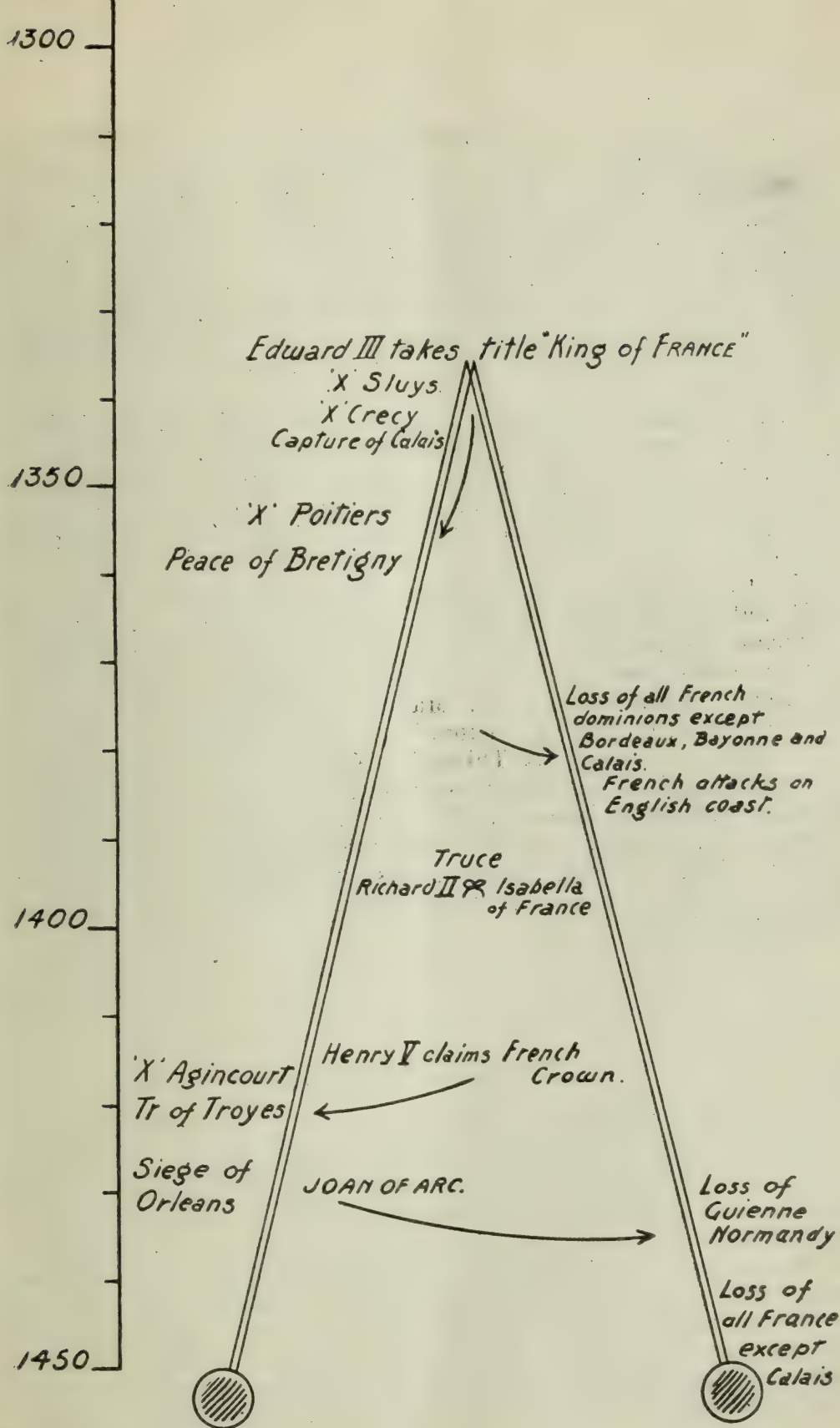


FIG IX. CHART SHOWING THE "SWING OF THE PENDULUM" IN THE HUNDRED YEARS' WAR.

(Adapted from a diagram in "Since Waterloo" by Dr. Robert Jones, by permission of Messrs. Constable and Company, Limited.)

But the stimulus chart has its uses even for people over fourteen. Dr. Hayward proposes that "each of the great arts, sciences and movements" should have "its own ribbon-like chart . . ." containing portraits of its leaders and heroes. A chart recently published by the Cambridge University Press with sketches illustrating the evolution of shipbuilding, arms and architecture might well serve as a starting place for studies in social history; and work on local history can be initiated by charts showing drawings of some typical locality during the most important phases of its development.

Such stimulus charts can be very attractive and very delightful; but their attraction lies mainly in their freshness. They should not therefore form a normal part of the furniture of any class-room or lecture-room, but should only hang there on occasion; whereas the chart which aims at fixation should hang there as long as possible.

The time chart has its place in the textbook, as well as on the wall and the blackboard, and in the private notebook. In the textbook its principle function is to elucidate and emphasise synchronisms; and its use for this purpose has already been excellently illustrated in Mr. Marvin's "Living Past," in the "Groundwork of British History" (Warner and Marten), and in the "History of Everyday Things." No textbook should be without synchronising charts of this sort, and textbooks for adults might usefully add charts intended, like the earlier charts in Mr. Wells's "Outline of History," to illustrate the comparative duration of periods. But textbook charts of this type are not much use for boys and girls: for anyone under seventeen this function is best fulfilled by the live teacher.

## V

### THE CHART-MAKERS.

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Who is to make the charts?

In some cases the question almost answers itself. The chart that aims at selection is useless unless the student is also the selector. The recapitulatory chart, summarising a lesson or course of reading, can hardly achieve its purpose unless the class plays a large part in its making. The composite chart which analyses and diagnoses events gains very greatly in value if it is made by those who are to use it; and though a chart as simple as the Labour Chart on p. 9 is interesting to the casual observer, as soon as a composite chart becomes at all elaborate it is confusing and consequently useless to people who have not shared in its construction.



A chart used mainly for stimulus, on the other hand, whether it serves its purpose by giving points of departure for fresh interests, or by supplying a bird's-eye view of a series of developments, may well be presented ready made. The military chart reproduced in Fig. vi., the chart illustrative of social history recently published by the Cambridge University Press,\* and the charts summarising local history described on p. 7, might all profitably be used as stimulus charts: and though the chart made *ad hoc* by the teacher will be more relevant and therefore more interesting, some charts of this kind are necessarily so generalised that they could be produced almost as well by the publisher.

Wall charts for boys and girls between ten and fourteen aiming, as they do, partly at giving a bird's-eye view, partly at stimulating interest, and partly at facilitating memory work, are naturally the joint work of the teacher and the class. Whether it answers best to start with only the bare chronological framework—the time-line and the divisions and numbers of the centuries—or to have from the outset a few enticing entries and pictures already in place—depends a good deal on the technique and personality of the teacher, and perhaps even more on the stage of development of the class. But in all cases the framework will naturally be provided by the teacher and the majority of the illustrations will come from the children.

The most definite proposal for the provision of History charts comes from Dr. Hayward. He would like to see authoritative wall charts supplied by the State. "Scientific charts of time and space should be statutorily hung on the walls of every school so that false views . . . could not obtain a fixed lodgment in children's minds and so that a definite and true Time and Space scheme could receive a very fixed lodgment there." He would have on the walls of the school hall "three charts: an astronomical beginning near corner (1), a geological near corner (2), an historical near corner (3)," so that "the child who walks from corner (3) to corner (4) will symbolically walk through the several hundreds of thousands of years of man's existence on the earth," and this chart "should present the history of the world under the conventional forms of empires and dynasties, but with the addition of a few hundred events and names of specifically cultural importance." Each of us who is interested in the teaching of History desires that chart, but each of us would like to make it himself, and not one of us is prepared to let his pupils be victimised by anyone else. Dr. Hayward's chart, with its "few hundred events and names," as well as "empires and dynasties," would overwhelm our pupils with its complexity: if A had the making of the official chart it

\* "Graphic Chart of English History," G. H. Reed. Price 4s. 6d.

would consist mainly of battle pieces : if B cornered the market we should get nothing but literature and art. We have seen other people's charts and know what to expect. We come sadly to the conclusion that the "authoritative chart" is possible only in Utopia, where the school hall is half a mile long, and its walls are reserved exclusively for the History teacher, and all History teachers are like-minded with ourselves. Outside Utopia the perfect chart must be made *ad hoc*.

For the chart loses its virtue as soon as its entries become too numerous. And since those entries must be so highly selected, they must be strictly relevant to the interests, actual or potential, of one's pupils : a result which can usually only be achieved if the chart is made for the occasion and the class.

But the chart which aims at stimulus, unlike the memorising chart, might often be made for us. It does not aim at completeness, so that there is not the same danger of overcrowding, and it matters less therefore if it contains something its users have no taste for, or omits something that is closely related to their lives and interests. Stimulus charts—panorama charts for the kindergarten, puzzle charts intended as a basis for the individual reading of older boys and girls, or pictorial presentations of development designed for people who are almost grown-up—might usefully be provided by the publisher.

Publishers might also help us in another way. The chief labour of charting lies in the measuring and marking of the time-line. There is no reason why this measuring and marking should not be done for us and why charting paper should not be as easy to obtain as squared science paper.

Charting paper is wanted in two sizes : in sheets small enough to go into an ordinary notebook, and in rolls thirty inches wide for the wall charts. The paper should be divided vertically by lightly-drawn lines marked off into groups of ten, and in the case of the rolled paper for wall charts should have, in addition, a bold horizontal time-line. The chart-maker would need only to number his centuries and decades and the pleasures of charting could begin.

Charting would then become as normal a part of historical work as graphing is of mathematics and mapping of geography. History teaching on modern lines can never be satisfactory till this is the case. Without the chart the History teacher is left to choose between the mechanical and over-elaborate precision of the old type of work, and the vague and indefinite knowledge which is so often the main characteristic of the new. The chart, used wisely and with restraint, saves us both from the mechanical and from the vague. It is as necessary for the proper approach to History as the map is for geography.



The next business of the History teacher is to convince the authorities that his work cannot be efficient till History, like every other subject, has its appropriate equipment: and of this equipment the chart is an essential and initial part.

*[I have to thank Miss M. Barker for the loan of her Rolled Chart, and Mrs. Fraser Davies for the Chart reproduced in Fig. viii.; and Miss Hutchinson and the Headmistress of the King's High School, Warwick, for help with the Wall Chart in Fig. v. H.M.M.]*

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